

Serial No.: 10/721,916
Group Art Unit: 2813

AMENDMENTS TO CLAIMS

- Please cancel claims 11-20 without prejudice and subject to re-introduction in the present application following withdrawal of the restriction requirement herein.
- Please amend pending claim 1 as indicated below.
- Please add new claims 21-30.
- A complete listing of all claims and their status in the application is as follows:

1. (currently amended) A method for fabricating a semiconductor heat spreader, comprising:

providing a unitary metallic plate; and
forming the unitary metallic plate into:

a panel;

channel walls depending from the panel to define a channel between the

channel walls and the panel for receiving a semiconductor therein;

at least two feet extending from respective channel walls for attachment to a

substrate; ~~and~~

at least one external reversing bend; and

a cross-sectional profile that is substantially constant in at least one horizontal direction.

2. (original) The method of claim 1 wherein the feet are selected from an arched foot, a stand-off foot, a slotted stand-off foot, a toed foot, a stand-off toed foot, a flat foot, a slotted flat foot, a zigzag foot, a box foot, and a combination thereof.

3. (original) The method of claim 1 further comprising forming the feet to accommodate respective set volumes of adhesive therebeneath for attaching the semiconductor heat spreader to a substrate.

4. (original) The method of claim 1 further comprising forming an electromagnetic interference shield for the channel.

Serial No.: 10/721,916
Group Art Unit: 2813

5. (original) The method of claim 1 further comprising:
providing an additional unitary metallic plate; and
forming the additional unitary metallic plate into a unitary auxiliary heat spreader
configured for attachment on top of the semiconductor heat spreader.

6. (original) The method of claim 5 further comprising forming attachment
means for attaching the unitary auxiliary heat spreader to the semiconductor heat spreader, the
attachment means being selected from tabs, locking tabs, deformable sides, side ledges, side
clips, clip bosses, center clips, side arms, and a combination thereof.

7. (original) The method of claim 1 wherein forming the unitary metallic
plate further comprises forming the unitary metallic plate in substantially a single metal
forming process to also form an integral auxiliary heat spreader located on top of the panel.

8. (original) The method of claim 1 wherein forming the unitary metallic
plate further comprises forming the unitary metallic plate in substantially a single metal
forming process into a cross-sectional profile that is substantially constant in at least one
horizontal direction.

9. (original) A method for fabricating a semiconductor heat spreader,
comprising:

providing a unitary metallic plate;

forming the unitary metallic plate in substantially a single metal forming process into:

a panel;

channel walls depending from opposite sides of the panel to define a channel
between the channel walls and the panel for receiving a semiconductor
therein;

at least two feet extending from respective channel walls on opposite sides of
the panel for attachment to a substrate, the feet being:

selected from an arched foot, a stand-off foot, a slotted stand-off foot, a
toed foot, a stand-off toed foot, a flat foot, a slotted flat foot, a
zigzag foot, a box foot, and a combination thereof; and

formed to accommodate respective set volumes of adhesive
therebeneath for attaching the semiconductor heat spreader to a
substrate;

Serial No.: 10/721,916
Group Art Unit: 2813

a cross-sectional profile that is substantially constant in at least one horizontal direction; and
at least one external reversing bend.

10. (original) The method of claim 9 further comprising:
providing an additional unitary metallic plate;
forming the additional unitary metallic plate in substantially a single metal forming process into a unitary auxiliary heat spreader configured for attachment on top of the semiconductor heat spreader; and
forming attachment means for attaching the unitary auxiliary heat spreader to the semiconductor heat spreader, the attachment means being selected from tabs, locking tabs, deformable sides, side ledges, side clips, clip bosses, center clips, side arms, and a combination thereof.

Claims 11-20. (canceled)

21. (new) A method for fabricating a semiconductor heat spreader, comprising:
providing a unitary metallic plate;
forming the unitary metallic plate into:

a panel;
channel walls depending from the panel to define a channel between the channel walls and the panel for receiving a semiconductor therein;
at least two feet extending from respective channel walls for attachment to a substrate;
at least one external reversing bend; and
a cross-sectional profile that is substantially constant in at least one horizontal direction; and

forming the unitary metallic plate to also form an integral auxiliary heat spreader located on top of the panel.

22. (new) The method of claim 21 wherein the feet are selected from an arched foot, a stand-off foot, a slotted stand-off foot, a toed foot, a stand-off toed foot, a flat foot, a slotted flat foot, a zigzag foot, a box foot, and a combination thereof.

Serial No.: 10/721,916
Group Art Unit: 2813

23. (new) The method of claim 21 further comprising forming the feet to accommodate respective set volumes of adhesive therebeneath for attaching the semiconductor heat spreader to a substrate.

24. (new) The method of claim 21 further comprising forming an electromagnetic interference shield for the channel.

25. (new) The method of claim 21 further comprising:
providing an additional unitary metallic plate; and
forming the additional unitary metallic plate into a unitary auxiliary heat spreader configured for attachment on top of the semiconductor heat spreader.

26. (new) The method of claim 25 further comprising forming attachment means for attaching the unitary auxiliary heat spreader to the semiconductor heat spreader, the attachment means being selected from tabs, locking tabs, deformable sides, side ledges, side clips, clip bosses, center clips, side arms, and a combination thereof.

27. (new) The method of claim 21 wherein forming the unitary metallic plate further comprises forming the unitary metallic plate in substantially a single metal forming process to also form an integral auxiliary heat spreader located on top of the panel.

28. (new) The method of claim 21 wherein forming the unitary metallic plate further comprises forming the unitary metallic plate in substantially a single metal forming process into a cross-sectional profile that is substantially constant in at least one horizontal direction.

29. (new) A method for fabricating a semiconductor heat spreader, comprising:
providing a unitary metallic plate;

forming the unitary metallic plate into:

a panel;

channel walls depending from opposite sides of the panel to define a channel between the channel walls and the panel for receiving a semiconductor therein;

at least two feet extending from respective channel walls on opposite sides of the panel for attachment to a substrate, the feet being:

Serial No.: 10/721,916
Group Art Unit: 2813

selected from an arched foot, a stand-off foot, a slotted stand-off foot, a toed foot, a stand-off toed foot, a flat foot, a slotted flat foot, a zigzag foot, a box foot, and a combination thereof; and formed to accommodate respective set volumes of adhesive therebeneath for attaching the semiconductor heat spreader to a substrate;

a cross-sectional profile that is substantially constant in at least one horizontal direction; and
at least one external reversing bend.

30. (new) The method of claim 29 further comprising:

providing an additional unitary metallic plate;

forming the additional unitary metallic plate into a unitary auxiliary heat spreader configured for attachment on top of the semiconductor heat spreader; and

forming attachment means for attaching the unitary auxiliary heat spreader to the semiconductor heat spreader, the attachment means being selected from tabs, locking tabs, deformable sides, side ledges, side clips, clip bosses, center clips, side arms, and a combination thereof.